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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,552	11/24/2003	Masahiko Amano	056207.52935US	1816

23911 7590 07/19/2006

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EXAMINER

GRANT, ROBERT J

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/718,552

Applicant(s)

AMANO ET AL.

Examiner

Robert Grant

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
4a) Of the above claim(s) 4 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paul et al. (US 5,198,698) in view of Kikuchi (US 6,600,293).

As to Claim 1, Paul discloses a power supply system having a power supply including an electric generator (Figure 7, element 62) and a battery (element 45), and a power control unit (element 70) for controlling electric power supplied from said power supply to plural electric loads (element 49), wherein said power supply system includes a battery condition sensing device for sensing the operative condition of said battery and load condition sensing device for sensing the operative condition of said plural electric loads (Column 4, lines 8-19), and said power supply system estimates, in response to a new electric load, a variation of the power supply voltage of said plural electric loads based on the condition of said battery and the operative condition of said new electric load (Column 8, lines 28-34). Paul does not expressly disclose where in the electric load is limited when the estimated electric power supply voltage is smaller than a predetermined value or selecting at least one of the plural of new electrical loads for receiving power. Kikuchi discloses the current of the electric load is limited when

Art Unit: 2838

said estimated electric power supply voltage is smaller than a predetermined value (Column 6, lines 18-21) and selecting at least one of the plural of new electrical loads for receiving power (Column 6, lines 16-23). It would have been obvious to a person having ordinary skill in the art at the time of this invention to take the teaching of Kikuchi and limit the output to the load in order to protect the power supply system for being damaged.

As to Claim 2, Paul in view of Kikuchi disclose the power supply system according to claim 1 wherein the variation of said power supply voltage is estimated in consideration of the maximum output current of said electric generator (Column 7, lines 49-63).

3. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paul in view of Kikuchi in further view of Nordentoft (US 6,662,563).

As to Claim 3, Paul in view of Kikuchi disclose the power supply system according to claim 1. Neither Paul nor Kikuchi disclose wherein the current of said electric load is limited in consideration of the level of importance said electric load and the magnitude of current. Nordentoft disclose wherein the current of said electric load is limited in consideration of the level of importance said electric load and the magnitude of current (Column 7, lines 37-41). It would have been obvious to a person having ordinary skill in the art at the time of this invention to use the teaching of Nordentoft and set levels of importance on the various electrical loads so that power is not wasted on a non essential device.

As to Claim 5, Paul in view of Kikuchi disclose the power supply system according to claim 1. Paul in view of Kikuchi disclose adjusting the power supply based upon the battery condition. Paul in view of Kikuchi do not expressly disclose a using a command to make the electric load less severe. Nordentoft discloses where in the electric load is adjusted do to priority and power output conditions (Column 7, lines 37-41). Therefore it would have been obvious to a person having ordinary skill in the art at the time of this invention to combine the teachings of Nordentoft with power supply of Paul in view of Kikuchi and control the load based upon the battery condition, so as to prevent unnecessary strain on the power supply system.

1. Claim 6 is rejected under 35 U.S.C. 103(b) as being unpatentable over Paul in view of Kikuchi in further view of Hikita et al. (US 5,608,309).

As to claim 6, Paul in view of Kikuchi discloses all the limitation of claim 1. Paul in view of Kikuchi do not expressly disclose generating a voltage value based on the battery condition. Hikita discloses a target voltage value is commanded to said electrical generator based of the battery condition sensed by said battery condition sensing device (Column 3, lines 7-9). It would have been obvious to one having ordinary skill in the art at the time of this invention to combine the teachings of Hikia with the device of Paul in view of Kikuchi and be capable if setting the generator to output the voltage required by the battery in order to most efficiently charge the battery.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paul in view of Kikuchi in further view of Hsieh (US 5,811,888).

As to claim 7, Paul discloses a power supply system having a power supply including an electric generator (Figure 7, element 62) and a battery (element 45), and a power control unit (element 70) for controlling electric power supplied from said power supply to plural electric loads (element 49), wherein said power supply system includes a battery condition sensing device for sensing the operative condition of said battery and load condition sensing device for sensing the operative condition of said plural electric loads (Column 4, lines 8-19), and said power supply system estimates, in response to a new electric load, a variation of the power supply voltage of said plural electric loads based on the condition of said battery and the operative condition of said new electric load (Column 8, lines 28-34). Paul does not expressly disclose where in the electric load is limited when the estimated electric power supply voltage is smaller than a predetermined value or selecting at least one of the plural of new electrical loads for receiving power. Kikuchi discloses the current of the electric load is limited when said estimated electric power supply voltage is smaller than a predetermined value (Column 6, lines 18-21) and selecting at least one of the plural of new electrical loads for receiving power (Column 6, lines 16-23). It would have been obvious to a person having ordinary skill in the art at the time of this invention to take the teaching of Kikuchi and limit the output to the load in order to protect the power supply system for being damaged. Paul in view of Kikuchi do not expressly disclose a time delay. Hsieh discloses a power supply wherein it has a function in which the start of operation of said

Art Unit: 2838

electric load is delayed by a predetermined time at the time of the operative requirement of the electric load (Column 3, lines 1-22). It would have been obvious to a person having ordinary skill in the art at the time of this invention to combine the teachings of Hsieh delay circuit with the power supply system of Paul in view Of Kikuchi in order to prevent excessive load and damage to the power supply system.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-3 and 5-6 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

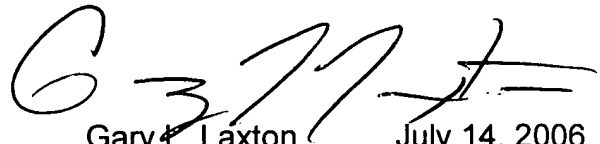
Art Unit: 2838

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Grant whose telephone number is (571) 272-2727. The examiner can normally be reached on Monday thru Friday 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on (571) 272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Gary L. Laxton July 14, 2006  
Primary Examiner  
Art Unit 2838

RG